



# Scarlet Solar Energy Project

## Initial Study

*prepared by*

**County of Fresno**  
Department of Public Works and Planning  
2220 Tulare Street, Sixth Floor  
Fresno, California 93721  
Contact: Christina Monfette

*prepared with the assistance of*

**Rincon Consultants, Inc.**  
7080 N. Whitney, Suite 201  
Fresno, California 93720

**September 2018**



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# Table of Contents

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Initial Study.....	1
1. Project Title.....	1
2. Lead Agency.....	1
3. Project Applicant.....	1
4. Project Location.....	1
5. General Plan Designation.....	5
6. Zoning.....	5
7. Description of Project.....	5
8. Surrounding Land Uses and Setting.....	19
9. Other Public Agencies Whose Approval is Required.....	20
Environmental Factors Potentially Affected.....	21
Determination.....	21
Environmental Checklist.....	23
1 Aesthetics.....	23
2 Agriculture and Forestry Resources.....	27
3 Air Quality.....	29
4 Biological Resources.....	31
5 Cultural Resources.....	35
6 Geology and Soils.....	37
7 Greenhouse Gas Emissions.....	41
8 Hazards and Hazardous Materials.....	43
9 Hydrology and Water Quality.....	47
10 Land Use and Planning.....	51
11 Mineral Resources.....	53
12 Noise.....	55
13 Population and Housing.....	59
14 Public Services.....	61
15 Recreation.....	63
16 Transportation/Traffic.....	65
17 Tribal Cultural Resources.....	69
18 Utilities and Service Systems.....	71
19 Mandatory Findings of Significance.....	75
References.....	77
Bibliography.....	77
List of Preparers.....	78

## Figures

Figure 1	Regional Location .....	2
Figure 2	Project Location .....	3
Figure 3	Site Plan.....	4

# Initial Study

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## 1. Project Title

Scarlet Solar Energy Project

## 2. Lead Agency

County of Fresno  
Department of Public Works and Planning  
2220 Tulare Street, Suite A  
Fresno, California 93721  
Contact: Christina Monfette  
(559) 600-4245

## 3. Project Applicant

RE Scarlet LLC  
353 Sacramento Street  
San Francisco, California 94111  
Contact: Christy Herron

## 4. Project Location

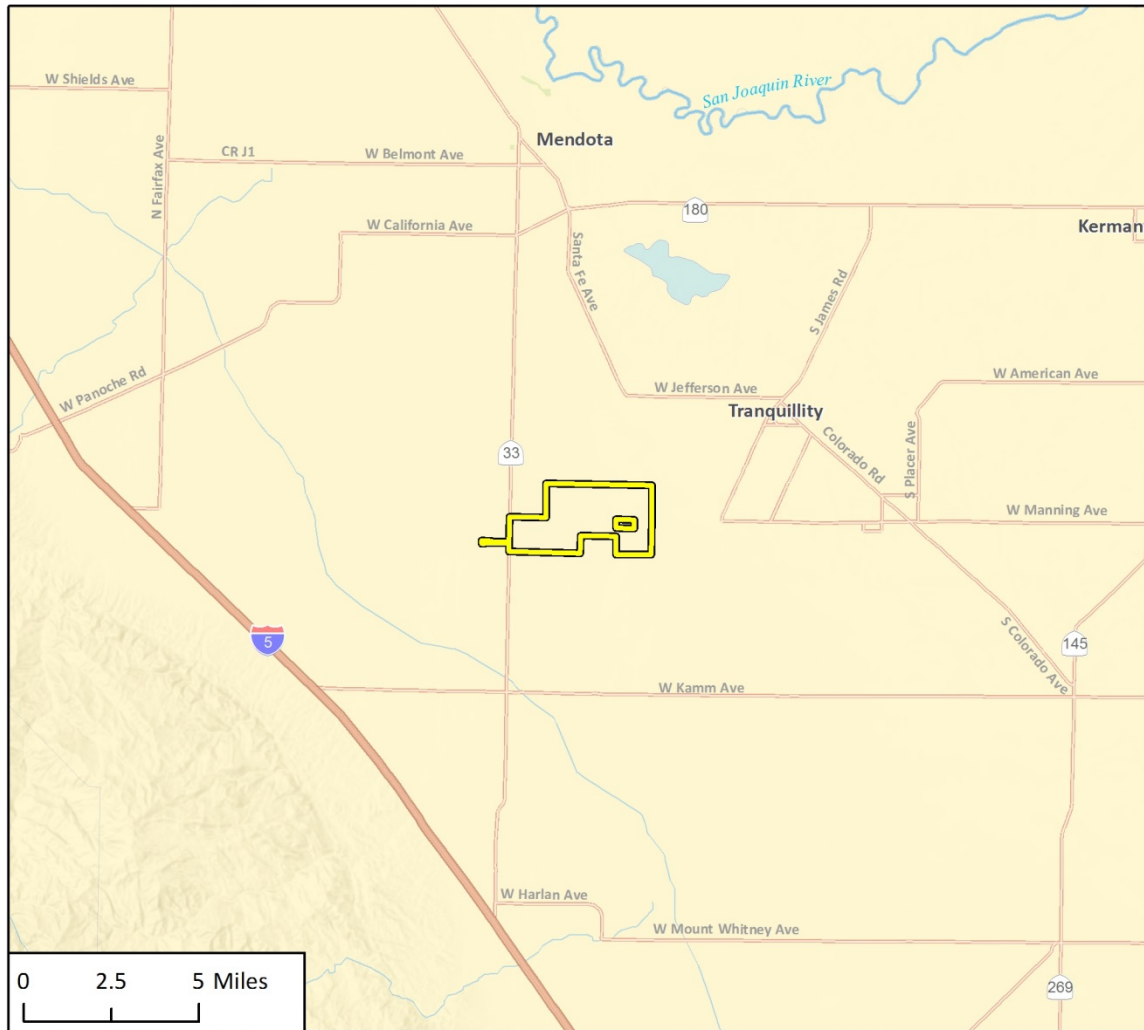
The project site is located in unincorporated Fresno County, approximately 3.5 miles west-southwest of the community of Tranquillity and approximately 6.5 miles east of Interstate 5 (I-5). The project site is northeast of and adjacent to the Tranquillity Solar Generating Facility, currently under construction. The project site would encompass up to 33 parcels<sup>1</sup> located generally south of West South Avenue, north of West Dinuba Avenue, east of Ohio Avenue and State Route 33 (SR 33, South Derrick Avenue), and west of South San Mateo Avenue. Figure 1 and Figure 2 show the location of the project site on regional and local scales, respectively. Figure 3 shows the preliminary site plan. Figures 2 and 3 show that the project site encompasses approximately 76 acres of federally owned land that are not part of the Project.<sup>2</sup>

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<sup>1</sup> The Project would be constructed on any or all of assessor parcels 028-07-134, 028-07-139, 028-07-140, 028-07-141, 028-07-143, 028-07-144, 028-07-145, 028-07-147, 028-07-148, 028-07-149, 028-08-166, 028-11-101, 028-11-102, 028-11-104, 028-11-106, 028-11-107, 028-11-109, 028-11-110, 028-11-112, 028-11-113, 028-11-114, 028-11-115, 028-11-116, 028-11-117, 028-11-119, 028-11-120, 028-12-061, 028-12-062, 028-10-074, 028-10-072, 028-10-082, 028-10-081, and 028-101-75S.

<sup>2</sup> The project site excludes assessor parcels 028-12-033, 028-12-035, 028-12-037, and 028-12-039.

Figure 1 Regional Location



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 Project Location

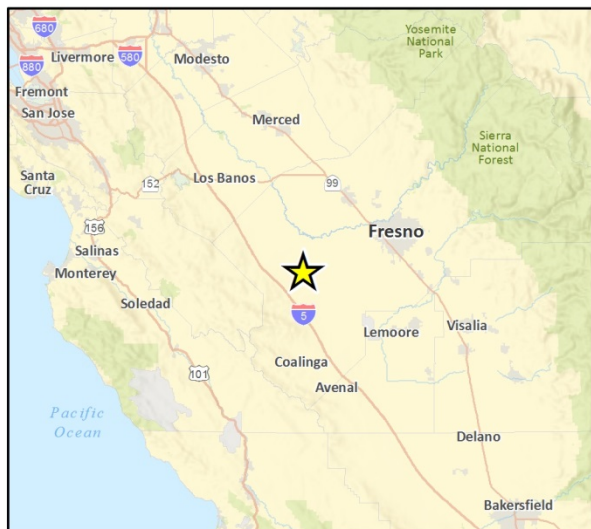


Fig 1 Regional Location



Figure 2 Project Location

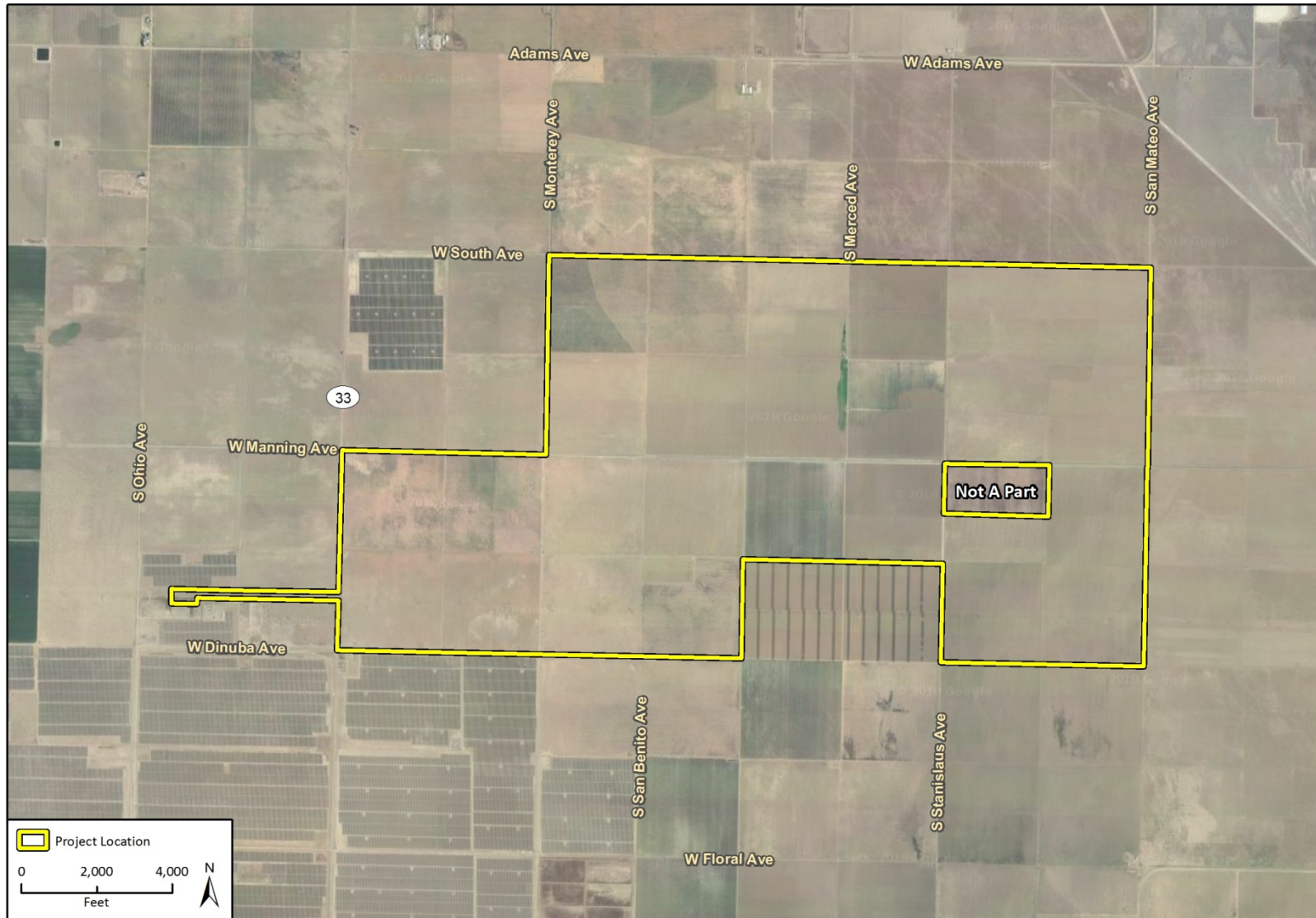
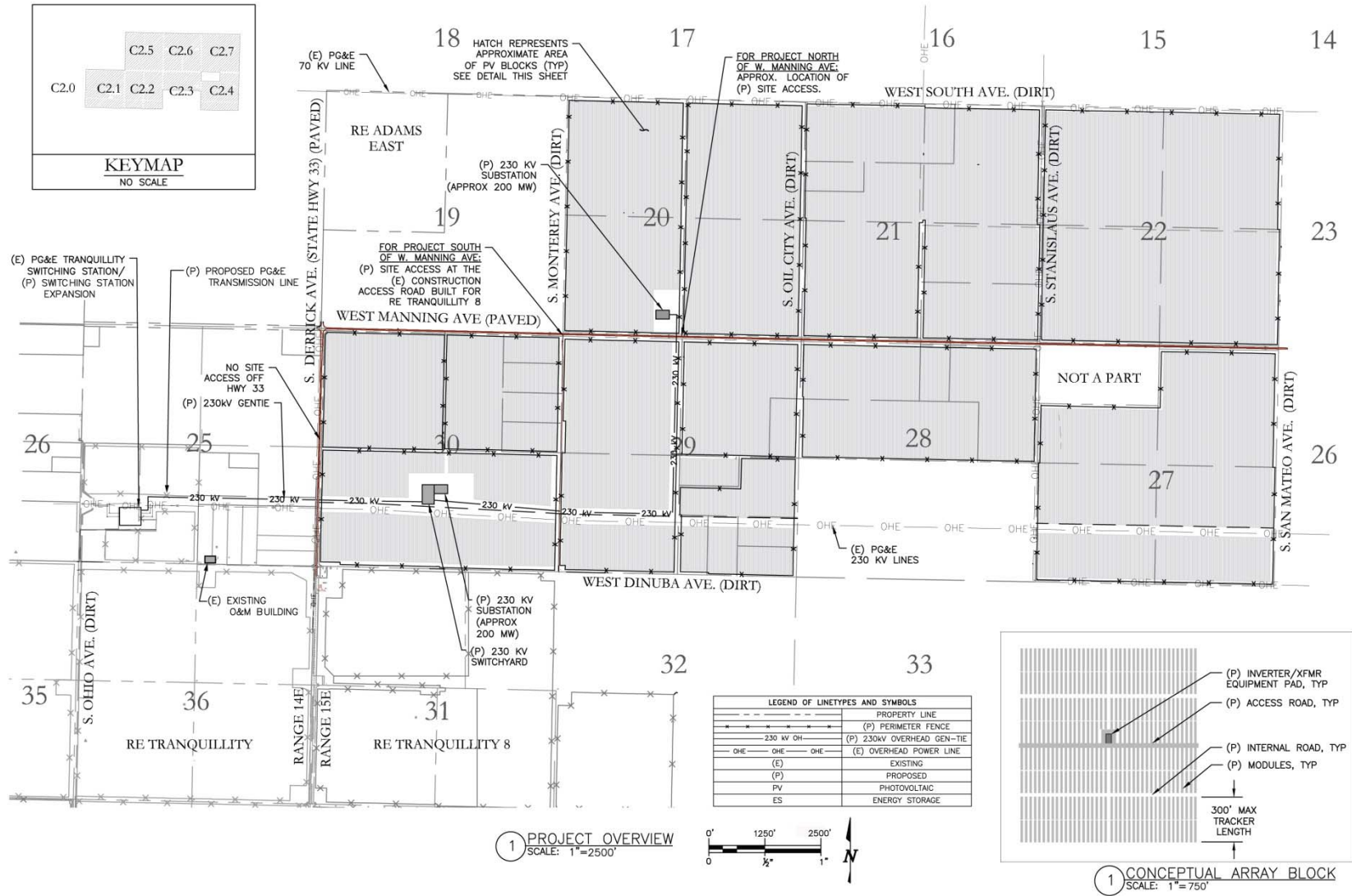


Figure 3 Site Plan



Source: Recurrent Energy, 2017.

## 5. General Plan Designation

Agriculture

## 6. Zoning

AE-20 (Exclusive Agricultural, 20-acre minimum parcel size)

## 7. Description of Project

The Scarlet Solar Energy Project (Project) is proposed by RE Scarlet LLC (Applicant), a wholly owned subsidiary of Recurrent Energy (RE) LLC. The Applicant has applied to the Fresno County Department of Public Works and Planning (the County) for an Unclassified Conditional Use Permit ([CUP] No. 3555) to construct, operate, maintain, and decommission a solar photovoltaic (PV) electricity generating facility (referred to in this document as the solar facility) and energy storage system and associated infrastructure to be known as the Scarlet Solar Energy Project. The solar facility would generate a total of up to 400 megawatts (MW) of alternating current (AC) at the point of electrical grid interconnection on approximately 4,089 acres in unincorporated western Fresno County. The solar facility would provide solar power to utility customers by interconnecting to the regional electricity grid at Pacific Gas and Electric Company's (PG&E) Tranquillity Switching Station located just west of the project site.

Expansion of PG&E's Tranquillity Switching Station and installation of approximately 1,900 feet of 230 kilovolt (kV) transmission line is necessary to connect the Scarlet solar facility to the statewide high-voltage electrical grid. While the County does not have approval authority over PG&E's switching station expansion and transmission line, which is under the jurisdiction of the California Public Utilities Commission, the environmental impacts of the switching station expansion and transmission line are reviewed as part of the Project.

The Project would operate year-round to generate solar electricity during daylight hours, and would store and dispatch power at the energy storage system during both daylight and non-daylight hours. The Project is anticipated to be constructed in continuous phases, with the first phase beginning in mid-2020. The exact timing of the last phase is dependent on opportunities in the solar market, but it is currently anticipated to be online as early as late 2021.

Components of the Project would include the following, which are further described below:

- Groups of solar arrays (arrays include PV modules and steel support structures, electrical inverters, transformers, cabling, and other infrastructure);
- Two electrical substations;
- A switchyard, including one high-voltage 230 kV utility switchyard, a 140-foot radio tower for telecommunications, and two 150-foot dead-end structures;
- Approximately 3.1 miles of 230 kV generator intertie (gen-tie) transmission line (from the substations and the 230 kV switchyard) to connect to PG&E's Tranquillity Switching Station;
- Improvements to PG&E electrical infrastructure, including a minor expansion of PG&E's Tranquillity Switching Station and approximately 1,900 feet of PG&E 230 kV transmission line to connect the 230 kV gen-tie line to the Tranquillity Switching Station;

- A 400 MW energy storage system, consisting of battery or flywheel enclosures and electrical cabling; and
- Other necessary infrastructure, including one permanent operation and maintenance (O&M) building, a septic system and leach field, a supervisory control and data acquisition (SCADA) system, a meteorological data system, buried conduit for electrical wires, overhead collector lines, on-site access roads, a shared busbar,<sup>3</sup> and wildlife-friendly security fencing.

## Photovoltaic Modules and Support Structures

The solar facility would include an estimated two million to six million solar modules, although the precise module count would depend on the technology ultimately selected. The ultimate decision for the module types and racking systems described herein would depend on market conditions and environmental factors, including the recycling potential of the modules at the end of their useful lives. Types of modules that may be installed include thin-film modules (including cadmium telluride [CdTe or “cad tel”] and copper indium gallium diselenide technologies), crystalline silicon modules, or any other commercially available PV technology. Solar thermal technology is not being considered. Module mounting systems that may be installed include either fixed-tilt or tracking technology, depending on the PV modules ultimately selected.

The PV modules will be manufactured at an off-site location and transported to the solar facility site. Modules will be arranged in strings with a maximum height of 12 feet. Module faces will be minimally reflective, dark in color, and highly absorptive of light. Modules will be arranged on the site in solar arrays. For single-axis tracking systems, the length of each row of modules will be approximately 300 feet along the north/south axis. For fixed-tilt systems, a row consists of multiple “tables” (four modules high by 10 modules wide, depending on design), each table approximately 65 feet along the east/west axis, with 1 foot spacing between each table. Spacing between each row will be a minimum of 4 feet. The solar module arrays would generate electricity directly from sunlight, and collect the electricity to a single point at one of the Project substations. The substations would interconnect to PG&E’s transmission and distribution system.

Structures supporting the PV modules would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which will be driven into the soil using pneumatic techniques, such as a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically will be spaced 10 feet apart. For a single-axis tracking system, piles typically will be installed to a reveal height of approximately 4 feet above grade, while for a fixed-tilt system the reveal height would vary based on the racking configuration specified in the final design. For single-axis tracking systems, following pile installation the associated motors, torque tubes, and drivelines (if applicable) will be placed and secured. Some designs allow for PV modules to be secured directly to the torque tubes using appropriate module clamps. For some single-axis tracking systems, and for all fixed-tilt systems, a galvanized metal racking system, which secures the PV modules to the installed foundations, will then be field-assembled and attached according to the manufacturer’s guidelines.

Fixed-tilt arrays will be oriented along an east-west axis with modules facing generally south. Tracking arrays will be oriented along a north-south axis with modules tracking east to west to follow the movement of the sun. The total height of the module system measured from ground

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<sup>3</sup> A busbar is a system of electrical conductors in a generating or receiving station on which power is concentrated for distribution to several electrical circuits.

surface will be up to 12 feet. For fixed-tilt systems, the modules will be fixed at an approximate 20- to 60-degree angle or as otherwise determined necessary during final Project design.

Where excavations are required, the majority of proposed construction activities will be limited to less than 6 feet in depth, however, some excavations, such as those undertaken for the installation of electricity collector poles and dead-end structures, may reach depths of 20 feet or more.

## Energy Storage System

The Project could include, at the Applicant's option, a battery or flywheel storage system capable of storing up to 400 MW of electricity and conducting energy to the regional electricity grid. If provided, the storage system would consist of battery or flywheel banks housed in electrical enclosures and buried electrical conduit. The Project could use one of a number of commercially available energy storage technologies, including but not limited to Lithium-ion (Li-ion), flow, or sodium sulfur batteries, or mechanical fly wheels. Battery systems are operationally silent and flywheel systems have a noise rating of 45 dBA.

The energy storage system will either be dispersed throughout the Project site, connected to the PV array via direct current ("DC-coupled"); or concentrated in one location on the site, connected to the PV array via alternating current ("AC-coupled"). Whether a DC-coupled system or an AC-coupled system is chosen for installation will depend on market conditions and the availability of commercial options.

For a DC-coupled system, energy storage containers and a DC to DC converter/optimizer will be co-located at the inverter equipment areas throughout the site. These containers would include a heating, ventilation, and air conditioning (HVAC) system and monitoring, controls, and operational management systems that will maintain normal battery operation and provide alerts in the case of malfunction.

For an AC-coupled system, the same energy storage containers with related equipment (minus the DC to DC converter/optimizer) will be grouped together in one area on the site. An AC-coupled system may alternatively use a single building to house all of the batteries and associated equipment.

The monitoring, controls, and operational management systems would connect to the overall solar facility management system and use sensors to monitor the performance of the energy storage system, detect malfunctions or conditions requiring maintenance. Management systems would provide plant operators with notification of these conditions in real time. The containers would include fire suppression systems, as necessary, for Li-ion battery systems. Flow battery containers would include secondary containment, as necessary, for circulating fluid systems.

Energy from the storage system will be conducted to the grid through the PV system inverters in the case of a DC-coupled system, or directly to the grid from the storage system in the case of an AC-coupled system. With the use of bi-directional inverters with electricity backflow preventers, both DC-coupled and AC-coupled energy storage systems could also be charged by the electrical grid (as well as be charged by the PV modules), and therefore provide grid support.

After the operating life of the solar facility is complete, the energy storage system will be decommissioned along with the rest of the solar facility. Batteries may be disposed of as hazardous waste, or recycled, depending on available technology. Li-ion batteries and their constituent parts will likely be recycled. Li-ion batteries contain a variety of valuable metals in addition to lithium, and recycling of these batteries is expected to become increasingly commonplace with the increased use

of batteries in consumer goods and electric vehicles. Some batteries may have the capacity to be reused at the end of the operating life of the project. The chemical components of flow batteries may either be disposed of as hazardous waste (i.e., neutralization of the liquid within the battery), or they may comprise valuable elements which will also be recycled or reused.

## Inverters and Transformers

The Project will be designed and laid out in approximately 2 MW increments which would include an inverter equipment area measuring approximately 40 feet by 25 feet. However, the final increment sizes ultimately would depend on available technology and market conditions. Each 2 MW increment would include an inverter-transformer station constructed on a concrete pad or steel skid, and centrally located within the PV arrays. Each inverter-transformer station would contain a DC combiner (which would collect DC electrical power from the PV modules), up to four inverters, a transformer, an auxiliary power transformer, and a switchboard approximately 8 to 11 feet high. If required based on site meteorological conditions, an inverter shade structure will be installed at each pad. The shade structure would consist of wood or metal supports and a durable outdoor material shade structure (metal, vinyl, or similar). The shade structure would extend up to 10 feet above the top of the inverter pad. Inverters could be unidirectional (most common), or bidirectional, depending on whether battery charging from the grid would take place.

Modules will be electrically connected into module strings using wiring secured to the module racking system. Underground cables, either rated for direct bury or installed in PVC conduit, will be installed to convey the DC electricity from the modules via combiner boxes located throughout the PV arrays, to inverters to convert the DC to AC. The output voltage of the inverters will be stepped up to 34.5 kV, the collection system voltage, via transformers located in close proximity to the inverters. The 34.5 kV level collection cables will either be buried underground or installed overhead on wood poles up to 70 feet tall. Some of the wood poles could be located at the outside edge of the property line, but a majority of these poles are expected to be located interior to the site. Between 300 and 500 wood poles located at 250-foot intervals could be installed across the entire Project site. The typical height of the poles will be approximately 50 to 60 feet, with diameters varying from 12 to 14 inches.

## Project Substations and Gen-Tie Transmission Lines

The two substations would transform voltage from 34.5 kV to 230 kV. The area of each substation and associated equipment will be approximately 30,000 square feet (150 feet by 200 feet). Figure 3 shows the substation locations. Each substation would collect consolidated intermediate voltage via cables from the PV collector system.

Structural components in each substation area would include:

- Power transformers (approximately 25 feet by 40 feet, and 25 feet high);
- Footings for power transformers;
- Pre-fabricated control buildings (each approximately 23 feet by 15 feet, and 12 feet high) to enclose the protection and control equipment, including relays and low-voltage switchgear;
- Footings (up to 12 feet deep) for the control enclosure structure ;
- Metering stand and capacitor bank(s);
- Circuit breakers and air disconnect switches;
- A telecommunications tower up to 65 feet in height;

- One microwave tower adjacent to the control building comprising a monopole structure up to 50 feet in height mounted with an antenna up to 5 feet in diameter;
- Dead-end structure(s) to connect substations to the PG&E Tranquillity Switching Station; and
- Two equipment storage containers measuring 40 feet by 8 feet by 9 feet each.

The substation areas will be graded and compacted to an approximately level grade. Concrete pads will be constructed on site as foundations for substation equipment, and the remaining area will be graveled to a maximum depth of approximately 6 inches. Because each of the substation transformers would contain mineral oil, the substations will be designed to accommodate an accidental spill of transformer fluid by the use of containment-style mounting. Each substation will be surrounded by an up-to 8-foot high chain link fence topped with one foot of barbed wire. Each of the dead-end structures would require foundations excavated to a depth of 20 feet or more.

Electrical transformers, switchgear, and related substation facilities will be designed and constructed to transform medium-voltage power from the Project's delivery system to the 230 kV gen-tie transmission lines (carried on either a single set of double-circuit structures or two sets of single-circuit transmission structures) connecting the project site to the PG&E Switching Station via a new segment of transmission line. The gen-tie structures would include tubular steel poles and H-frame structures with foundations excavated to a depth of 20 feet or more. The overhead gen-tie line will be up to approximately 3.1 miles long and consist of up to 30 structures. The structures could be up to 150 feet tall, although most will likely be no more than 110 feet high.

Other electrical upgrades within the California Independent System Operator (CAISO) system could be triggered in part by the proposed Project in combination with other projects in the CAISO queue. In particular, it is anticipated that lower voltage power lines could require reconductoring. Reconductoring is the process of replacing a lower-capacity conductor on existing power poles. Reconductoring associated with the Project would not require new ground disturbance and will typically be completed during daylight hours over the course of six weeks or less by a crew of line-working personnel.

## **PG&E Tranquillity Switching Station Expansion and Transmission Line**

To accommodate the solar facility and interconnect the 230 kV gen-tie line to the PG&E Tranquillity Switching Station, PG&E would complete improvements to its electrical facilities, including expansion of the existing Tranquillity Switching Station and construction of a new 230 kV transmission line. The Tranquillity Switching Station will be expanded to the north approximately 200 feet, increasing the size of the switching station by approximately 3 acres, to accommodate a new bay for the Project and a potential additional bay to accommodate the switching station's ultimate configuration. The switching station's electrical busbar will not increase in size. The new 230 kV transmission line will extend from the Tranquillity Switching Station to a point located just east of the Tranquillity Solar Project boundary. The PG&E transmission line will include approximately 1,900 feet of 230 kV conductor strung on approximately six new or existing tubular steel poles that will be approximately 140 feet high.

## **Other Infrastructure**

### *Operation and Maintenance Building*

An operation and maintenance (O&M) building to accommodate eight permanent operation and maintenance staff will be required for the Project. The Applicant may use an existing home/trailer

that is located northwest of the intersection of West Dinuba Avenue and SR 33, and is already in use by the Applicant for the Tranquillity Solar Project. If a new O&M building is constructed, it will be approximately 2,000 square feet in size (approximately 40 feet by 50 feet by 15 feet at its tallest point) and located within the project site near the main substation. The O&M building would include permanent plumbing and restroom facilities for use by the staff, including an underground septic system and leach field. Personnel temporarily on-site to perform periodic module washing (up to 4 times per year) will be provided with portable restrooms on the project site, as well as bottled water for drinking and hand washing. The O&M building will be constructed on concrete foundations.

#### *Septic System and Leach Field*

A septic system and leach field will be installed adjacent to the O&M building to support the restroom facilities and sewage needs at the O&M building during operation. Wastewater from the building would be discharged into the septic tank for minimum detention period of 24 hours where most of the solids would be removed. The septic tank would be 1,500 gallons and designed and constructed according to the Fresno County Local Agency Management Plan.

#### *Supervisory Control and Data Acquisition System (SCADA)*

The facility will be designed with a comprehensive SCADA system to allow remote monitoring of facility operation and/or remote control of critical components. The fiber optic or other cabling required for the monitoring system typically will be installed in buried conduit, leading to a SCADA system cabinet centrally located within the project site or a series of appropriately located SCADA system cabinets constructed within the O&M buildings. The dimensions of each cabinet will be approximately 20 feet by 8 feet by 9 feet high. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard wired connections to locally available commercial service providers. The Project's SCADA system would interconnect to this fiber optic network at PG&E's Tranquillity Switching Station.

#### *Meteorological Data Collection System*

The Project would include a meteorological (met) data collection system. Each met station would have multiple weather sensors: a pyranometer for measuring solar irradiance, a thermometer to measure air temperature, a barometric pressure sensor to measure air pressure, and wind sensors to measure speed and direction. The 4-foot horizontal cross-arm of each met system would include the pyranometer mounted on the left hand side and the two wind sensors installed on a vertical mast to the right. The temperature sensor will be mounted inside the solar shield behind the main mast. Each sensor will be connected by cable to a data logger inside the enclosure next to the temperature sensor.

#### *Access Roads*

The main access to the solar facility will be provided from West Manning Avenue to South Monterey Avenue with multiple points of ingress/egress for emergency access. Public access and vehicle use of West Manning Avenue (paved) and unpaved roadways<sup>4</sup> in the Project area will not be affected by the Project. In addition, there is a California Department of Transportation (Caltrans) future right-of-

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<sup>4</sup> It should be noted that these unpaved roads are private roads that are not maintained by the County.



way adjacent to SR 33, which will be avoided by the Project. The Project modules and electrical infrastructure will be set back from the existing SR 33 highway by a minimum of 50 feet plus additional clearance for any deed restrictions and the future right-of-way.

The on-site roadway system would include a perimeter road, access roads, and internal roads. The perimeter road and main access roads will be approximately 20 to 30 feet wide and constructed to be consistent with facility maintenance requirements and Fresno County Fire Department standards. These roads will be surfaced with gravel, compacted dirt, or another commercially available surface. Internal roads would have permeable surfaces and be approximately 12 to 20 feet in width or as otherwise required by Fresno County Fire Department standards. They will be treated to create a durable, dustless surface for use during construction and operation. This would likely involve surfacing with gravel, compacted native soil, or a dust palliative and would not involve lime treatment. Temporary driveway aprons to points of ingress/egress during construction and decommissioning, such as along West Manning Avenue to South Monterey Avenue, may be up to 80 feet wide to accommodate construction traffic; however, permanent driveway aprons will be built according to Fresno County Improvement Standards.

### *Fencing*

The boundary of the solar facility will be secured by up to 8-foot-high chain-link perimeter fences, topped with three-strand barbed wire. The fence design will be “wildlife friendly,” i.e., the bottom of the fence will be 5 inches above ground, on average, as measured from the top of the ground to the lowest point of the bottom of the fence. Public access rights on roadways through the project site will not be affected by the type of project fencing. Existing public vehicle use of West Manning Avenue and other private unpaved roadways would continue through the project site.

### *Lighting*

Motion sensitive, directional security lights will be installed to provide adequate illumination around the substation areas, each inverter cluster, at gates, and along perimeter fencing. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. All lighting also would conform to applicable Fresno County rules and regulations for outdoor lighting.

## **Water Requirements**

During the construction phase, if grading and grubbing is required, it is anticipated that a total of up to 360 acre-feet<sup>5</sup> of water will be used for dust suppression (including truck wheel washing) and other purposes (Recurrent Energy 2018). If grading and grubbing is not required, water needs will be less. During construction, non-potable water will be obtained from an existing private well on the Tranquillity Solar Project site and/or purchased from the Westlands Water District and trucked to the site from a well within 5 miles. During construction and decommissioning, potable water, for drinking and hand washing, will be brought to the site by a bottled water service provider.

During the operation and maintenance phase (which would last up to 40 years), the Project would require approximately 20-acre-feet annually for module washing, maintenance, and the O&M building restroom facilities, equivalent to 0.05 acre-feet (or 16,250 gallons) per MW annually. Of

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<sup>5</sup> One acre-foot of water equals 325,851 gallons – approximately the amount needed to cover an acre (roughly a football field) of ground one foot deep.

this, approximately 1.5 acre-feet of non-potable water will be used by employees on-site for washing or rinsing equipment, hand washing, and other non-toilet uses. Approximately 14.7 acre-feet will be used for washing the modules up to four times a year (up to 3.7 acre-feet of water per washing period). The remaining estimated water will be used to support on-site sheep (if grazing is used for weed control) and other miscellaneous needs (Recurrent Energy 2018). Operational water will be trucked in from an off-site local municipal water purveyor, likely the City of Fresno or City of Mendota. Potable water will be supplied to the O&M building by a licensed provider.

## Wastewater

During construction, restroom facilities will be provided by portable units to be serviced by licensed providers. A septic system and leach field will be installed adjacent to the O&M building to support the restroom facilities and sewage needs during operation. Personnel on-site to perform module washing (up to four times per year) will be provided with portable restrooms serviced by a licensed provider. Anticipated peak flow is 600 gallons into the leach field per day during Project operation (or 0.67 acre-feet per year) (Recurrent Energy 2018). No surface discharges are proposed, other than natural stormwater runoff. A Waste Discharge Permit will not be required from the Regional Water Quality Control Board because the Project will not exceed 2,500 gallons per day of sewage. The septic system will be required to be permitted by the Fresno County Department of Public Works and Planning. The septic system and leach field testing procedures and design will meet all applicable specifications and regulations.

## Solid Waste

Construction and decommissioning of the Project would involve the use of hazardous materials, such as fuels and greases to fuel and service construction equipment. Such substances may be stored in temporary aboveground storage tanks or sheds located on the project site. The fuels stored on-site will be in a locked container within a fenced and secure temporary staging area. If the quantities stored are estimated to be in excess of 1,320<sup>6</sup> gallons, storage will be undertaken in compliance with the Spill Prevention, Control, and Countermeasure (SPCC) Rule and a Hazardous Materials Business Plan, which will be developed prior to construction for submission to the Fresno County Division of Environmental Health. However, quantities are not likely to be in excess of 1,320 gallons. Trucks and construction vehicles will be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility will be carried out in accordance with federal, state, and county regulations. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of construction. Material Safety Data Sheets for all applicable materials present on-site will be made readily available to on-site personnel.

Construction materials will be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials will be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. It is anticipated that at least 20 percent of construction waste will be recyclable, and 50 percent of

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<sup>6</sup> Effective January 1, 2008 the Certified Unified Program Agencies are vested with the responsibility and authority to implement the Aboveground Petroleum Storage Act. Owners or operators of aboveground petroleum storage tanks are required to file a storage statement and implement spill prevention measures according to the Aboveground Petroleum Storage Act of 1990. Facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum are covered by this law.

those materials will be recycled (Recurrent Energy 2018). Wooden construction waste (such as wood from wood pallets) will be sold, recycled, or chipped and spread on the project site for weed control as appropriate. Other compostable materials, such as vegetation, might also be composted off-site. Non-hazardous construction materials that cannot be reused or recycled will be disposed of at municipal or county landfills. Hazardous waste and electrical waste will not be placed in a landfill, but rather will be transported to a hazardous waste handling facility (e.g., electronic-waste recycling). All contractors and workers will be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

Operation and maintenance activities would produce negligible volumes of solid and liquid wastes and are not expected to require hazardous materials. Storage batteries will likely be lithium-ion, which will be recycled. However, if they are not lithium-ion, the batteries would need to be periodically disposed of, approximately every six years. The transformers that will be located at the substations would use biodegradable seed oil, which is not a hazardous material. Oil disposal would occur in accordance with applicable regulations. PV modules and the inverters would not produce any waste during operation.

## Project Construction

### *Construction Schedule and Workforce*

Construction equipment would operate between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday for up to a maximum of 8 hours per piece of equipment, daily. Weekend construction work is not expected to be required, but may occur on occasion, depending on schedule considerations. All construction work, including any weekend work, will be required to comply with the Fresno County noise ordinance.

Construction of the Project would commence as early as mid-2020, and the last phase will be expected to be complete as early as late 2021 depending on opportunities in the solar market. Total duration of continuous construction will be approximately 18 months. The anticipated construction processes, schedule, and workforce are described in this section.

Agricultural activities are expected to continue during the Project construction phase on portions of the project site not being actively disturbed by construction activities.

Assuming continuous construction, phasing will be as follows:

- **Solar Facility Phase 1**, Site Preparation, would extend for approximately 16 weeks, or 80 working days.
- **Solar Facility Phase 2**, PV Module System Installation (foundations, tracker racks, and modules), would extend for a duration of approximately 56 weeks, or 282 working days, and would overlap Phase 1 by approximately 14 weeks.
- **Solar Facility Phase 3**, Installation of Inverters, Substations, and Connection, would extend for a duration of 24 weeks, or 121 working days, and overlap Phase 2 by about 16 weeks.
- **Energy Storage System Phase 1**, Site Preparation, would extend for a duration of up to 5 weeks, or 25 working days, and may overlap with Phase 3 of the solar facility construction.
- **Energy Storage System Phase 2**, Foundations, Structures, and DC Electrical System Installation, would extend for a duration of up to 35 weeks, or 175 working days.
- **Energy Storage System Phase 3**, Inverter, Substation, and AC Electrical System Installation, would extend for a duration of up to 29 weeks, or 145 days.

The total number of construction workers at any given time would range between 132 and 678. The exact timing of installation of the energy storage system is unknown, but it may overlap with construction of the final phase of the solar facility. The majority of the labor force is expected to be from Fresno and the surrounding communities with an average round-trip commute of 100 miles (Recurrent Energy 2018).

### *Solar Facility Phase 1 and Energy Storage System Phase 1: Site Preparation*

#### **STAGING AND OTHER TEMPORARY WORK AREAS**

A staging/refueling area will be located at or near the primary access point to the project. Assuming continuous construction, one main staging area will be located near West Manning Avenue at the western end of the site. Preparation of laydown areas would include grubbing, clearing, grading, and compaction. The staging and laydown areas will be used for material and equipment storage, reporting location for workers, parking areas for vehicles and equipment, and the ultimate location of the O&M building. Laydown areas would encompass up to 10 acres and will be secured with an 8-foot fence. Temporary power will be provided via mobile generators or local distribution lines.

#### **ACCESS ROADS**

The solar facility's on-site roadway system would include a perimeter road, access roads, and internal roads, which are described above. Road construction would proceed as follows: the ground will be grubbed (cleared of vegetation), scarified (loosened up), moisture conditioned, compacted, and graded with a crown in the center.

#### **SECURITY FENCING**

As described above, Project fencing would include perimeter fencing. Fence posts will be spaced approximately 10 feet apart, drilled and grouted or driven pneumatically into the soil profile up to an estimated 5 feet deep.

#### **CONSTRUCTION-RELATED GRADING**

As necessary for equipment access, the site will be grubbed and scarified. As the site is nearly flat and has been historically graded/tilled, Project-related grading will be minimal and occur only as necessary to level dips and hills. The site cut and fill will be approximately balanced, or minimal import/export will be necessary. During Phase 1 (site preparation), an average of 35 acres in various portions of the site will be disturbed daily at any given time. During Phase 2, an average of 25 acres would undergo installation at any one time, with an estimated maximum active disturbance area of up to 90 acres when Phase 1 and 2 overlap.

#### **EROSION AND SEDIMENT CONTROL AND POLLUTION PREVENTION**

The Applicant would prepare a single or multiple Stormwater Pollution Prevention Plans (SWPPP), which will be based on the final engineering design. The SWPPP will be prepared by a qualified engineer or erosion control specialist, and will be implemented before construction. The SWPPP will be designed to reduce potential impacts related to erosion and surface water quality during construction activities and throughout the life of the Project. It would include Project information and best management practices (BMPs). The BMPs would include dewatering procedures, stormwater runoff quality control measures, concrete waste management, watering for dust

control, and construction of perimeter silt fences, as needed. The SWPPP will be submitted to the RWQCB and Fresno County prior to issuance of any building or grading permits.

### *Solar Facility Phase 2: Photovoltaic Module System*

Phase 2 would involve PV module installation, array assembly, and racking. The structure supporting the PV module arrays would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which will be driven into the soil using pneumatic techniques, similar to a hydraulic rock hammer attachment on the boom of a rubber-tired backhoe excavator. The piles typically are spaced 10 feet apart. For a single-axis tracking system, piles typically will be installed to a reveal height of approximately 4 feet above grade, while for a fixed-tilt system the reveal height would vary based on the racking configuration specified in the final design. For single-axis tracking systems, following pile installation the associated motors, torque tubes, and drivelines (if applicable) will be placed and secured. Some designs allow for PV modules to be secured directly to the torque tubes using appropriate module clamps. For some single-axis tracking systems and for all fixed-tilt systems, a galvanized metal racking system, which secures the PV modules to the installed foundations, will then be field-assembled and attached according to the manufacturer's guidelines.

### *Solar Facility Phase 3 and Energy Storage System Phases 2 and 3: Inverters, Transformers, Substations, Electrical Collector System and Energy Storage System*

Underground cables to connect module strings will be installed using ordinary trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths will be in accordance with local, State, and Federal requirements, and will likely be buried at a minimum of 18 inches below grade, by excavating a trench approximately 3 to 6 feet wide to accommodate the conduits or direct buried cables. After excavation, cable rated for direct burial or cables installed inside a polyvinyl chloride (PVC) conduit will be installed in the trench, and, the excavated soil will likely be used to fill the trench and lightly compressed. All cabling excavations will be to a maximum depth of 10 feet.

All electrical inverters and the transformer will be placed on concrete foundation structures or steel skids. In lieu of steel skids or pre-cast concrete foundations, foundations for the transformer and inverter locations will be formed with plywood and poured-in-place concrete, and reinforced with structural rebar. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. The substation equipment, inverters, collector system, and PV array systems will be tested prior to commencement of commercial operations. Upon completion of successful testing, the equipment will be energized.

The substation areas will be excavated for the transformer equipment and control building foundation and oil containment area. The site area for the substations will be graded and compacted to an approximately level grade. Foundations for the substation will be formed with plywood and reinforced with structural rebar. Concrete pads will be constructed as foundations for substation equipment, and the remaining area will be graveled. Concrete for foundations will be brought on-site from a batching plant in Fresno County.

The 400 MW energy storage system, including battery or flywheel enclosures and electrical cabling, will be installed at the project site, concurrently with Phase 3. The system will be largely assembled off-site and transported to the project site for installation.

### **CONSTRUCTION SITE RESTORATION AND REVEGETATION**

Following the completion of major construction, the project site will be re-seeded/re-vegetated with low-growing plant species appropriate for maintaining soil quality and controlling weed growth to reduce fire hazards. Vegetation will be selected based on growth habit (lower growing cover will be preferred) and suitability for the area. Site restoration activities would include:

- On-site repurposing or removal of all vegetative material from grubbing, clearing, and pruning;
- Removal of all trash and construction debris;
- Removal of temporary construction fencing marking the perimeter of sensitive areas (washes, set-aside areas, cultural area); and
- Removal of all construction equipment and any supplies and materials that were not consumed on-site.

Following the completion of site restoration activities, the construction staging areas will be restored to their original condition by the planting of appropriate species.

### **CONSTRUCTION ACCESS, EQUIPMENT, AND TRAFFIC**

All materials for the Project's construction will be delivered by truck. The majority of truck traffic would occur on designated truck routes and major streets. Flatbed trailers and trucks will be used to transport construction equipment and construction materials to the site. Project components will be assembled on-site.

### **CONSTRUCTION PERSONNEL TRAINING**

#### ***Biological Resources***

Prior to construction, a qualified biologist will be retained by the Applicant to conduct environmental awareness training for Project personnel. Such training would communicate information related to the protection of sensitive biological resources that might be present at the project site, and would include:

- A description of species of concern and associated habitats.
- The general provisions of applicable environmental regulations and the need to adhere to the provisions of the regulations.
- General measures being implemented to conserve the species of concern as they relate to the Project.

The training would include a discussion of the defined access routes to the project site and project site boundaries within which Project activities must be accomplished. Construction employees would strictly limit their activities, vehicles, equipment, and construction materials to the Project footprint and designated staging areas and routes of travel. The construction areas will be the minimal area necessary to complete the Project and will be specified in the construction plans. Construction areas will be demarcated on-site, and employees will be instructed to limit activities to these areas.

### ***Fire Suppression and Safety Training***

The Applicant would coordinate with the California Office of the State Fire Marshall and the Fresno County Fire Department to provide training for personnel to safely interrupt electrical power in the event of emergency incidents requiring fire suppression or rescue activities.

To minimize fire risk, combustible vegetation or agricultural products on and around the project site boundary will be actively managed by the Project owner or its affiliates. Combustible vegetation will either be limited in height or removed. In addition, fire breaks—in the form of 20-foot-wide roads—will be constructed around the Project boundary.

The Applicant would coordinate with the Fresno County Fire District in the development of a Fire Prevention and Emergency Action Plan for the site to address potential exposure to fire and other hazards in the project site. The plan would include at least the following provisions:

- **Fire Prevention Training.** The Applicant would provide training for fire personnel in the safe interruption of electrical power for emergency incidents requiring fire suppression or rescue activities.
- **Emergency Action Training.** The Applicant would train all construction and operation and maintenance personnel in:
  - Evacuation routes from the project site to safe areas, in the event of fire or other natural hazards.
  - Coordination with local fire department, sheriff department, and emergency medical services.
  - Safety measures in accordance with the California Occupational Safety and Health Administration (Cal/OSHA) regulations and guidance for construction, which will be reviewed by all Project construction staff prior to starting work. Safety measures would include those that address potential electrical incidents and fire hazards.
- **Fire Prevention Measures.** The Applicant would implement the following measures during Project construction and operation:
  - All applicable Fresno County improvement standards will be followed, to ensure accessibility and ground clearance of emergency vehicles (e.g., fire engines);
  - Vegetation will be maintained to reduce potential fire hazards at the project site;
  - Smoking will be prohibited at the project site, except within designated areas;
  - Work crews will be required to park vehicles away from flammable vegetation such as dry grass and brush. At the end of each workday, heavy equipment will be required to be parked over mineral soil, asphalt, or concrete, where available, to reduce the risk of fire; and
  - Fire-suppression equipment (e.g., fire extinguishers) will be made available on the project site at all times. All heavy equipment will be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

### **Operation and Maintenance**

Upon commissioning, the Project would enter the operation phase. The solar modules at the site would operate during daylight 7 days per week, 365 days per year. Operational activities at the project site would include: solar module washing; vegetation, weed, and pest management; security; responding to automated electronic alerts based on monitored data, including actual versus expected

tolerances for system output and other key performance metrics; and communicating with customers, transmission system operators, and other entities involved in facility operations.

Up to eight permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. On intermittent occasions, up to 25 workers could be required on-site if repairs or replacement of equipment were needed in addition to module washing. The duration of scheduled maintenance activities would vary in accordance with the required task, but could involve up to 40 workers full-time for up to two weeks up to four times per year for module washing, and a similar number and duration for workers regularly visiting the site for routine maintenance activities. The maximum number of staff on-site at any time will be 48 (40 temporary staff and eight permanent staff). The majority of the operational labor force is expected to be from Fresno and the surrounding communities with an average anticipated commute of 50 miles one way.

The facility will be designed with a comprehensive SCADA system to allow remote monitoring of facility operation and/or remote control of critical components.

### *Site Maintenance*

The project site maintenance program will be largely conducted on-site during daytime hours. Equipment repairs could take place in the early morning or evening when the plant will be producing the least amount of energy. Key program elements would include maintenance activities originating from the on-site operation and maintenance facilities and/or a regional operations and maintenance facility located within Fresno County, and on-site maintenance as required to clear weeds for ground-mount systems. Maintenance typically would include module repairs; module washing; maintenance of transformers, inverters, and other electrical equipment as needed; maintenance of the oil/water separator system; and road and fence repairs. Visual inspections of the transformers and the oil/water separator system will be conducted monthly. Pest and weed management also will be performed in accordance with the Pest and Weed Management Plan. On-site vegetation will be managed to ensure access to all areas of the site and to screen Project elements as needed. Solar modules will be washed up to four times each year using light utility vehicles with tow-behind water trailers, as needed to maintain optimal electricity production. No chemical cleaners will be used for module washing.

As part of ongoing operations and maintenance, the energy storage system will be inspected once a year at minimum. Regular preventative maintenance would include checking security of DC and AC connections, replacement of fans, filters, and pumps as required or recommended, fire suppression system inspection as required, and validating measurements of key electrical and environmental sensors.

### *Fire Suppression and Safety Training*

The fire suppression and safety training that would occur during the operations and maintenance phase of the Project will be similar to that described for the construction phase. It would occur annually and for every new employee.

## **Decommissioning and Site Reclamation**

### *Decommissioning of Equipment*

The Project is anticipated to have an operating life of up to 40 years. After this period, the facility will be either repowered or decommissioned. Repowering after the operating life is not anticipated



at this time; however, if repowering were to be pursued, it would require the owner to obtain all required permit approvals, including a revised Unclassified CUP. Project decommissioning would occur in accordance with the expiration of the Unclassified CUP and would involve the removal of all above-grade facilities, buried electrical conduit, and all concrete foundations in accordance with a Reclamation Plan. Utility-owned infrastructure will not be removed at the time the Project is decommissioned. In the event that a structure breaks off 4 feet or more beneath the ground surface, the remaining section will be left in place. If the structure breaks off in the upper 4-foot portion of soil, it will be excavated and removed. Equipment will be repurposed off-site, recycled, or disposed of in a landfill as appropriate. Decommissioning would involve the use of heavy equipment and personnel similar to that used for construction.

For the entire project site, decommissioning activities are expected to require approximately 3,000 truck trips, a workforce of approximately 100 workers, and would take up to 24 months. Decommissioning may occur simultaneously or individually as parts of the solar facility go offline. Appropriate hazardous materials control and erosion control measures will be used throughout the decommissioning process. It is anticipated that such controls will be substantially similar to those implemented during construction.

### *Site Reclamation*

A Reclamation Plan containing details regarding site reclamation and decommissioning will be submitted by the applicant to Fresno County prior to submittal of the draft environmental impact report (EIR). All road and other areas compacted during original construction or by equipment used for decommissioning will be tilled in a manner adequate to restore the sub-grade material to the proper density and depth consistent with adjacent properties. Low areas will be filled with clean, compatible sub-grade material. After proper sub-grade depth is established, locally sourced (from the City of Fresno or other location within 50 miles of the project site) topsoil will be placed to a depth and density consistent with adjacent properties. Locally sourced compost will be applied to the topsoil, and the entire site will be tilled to further loosen the soil and blend in the compost. An appropriate seed mixture will be broadcast or drilled across the site, and weed-free mulch will be applied to stabilize the soil and retain moisture for seedling germination and establishment.

## 8. Surrounding Land Uses and Setting

The project site is in unincorporated Fresno County along the western edge of San Joaquin Valley, which extends south from the Sacramento-San Joaquin River Delta in the north to the Tehachapi Mountains in the south. The Diablo coastal mountain range forms the valley's western border, while the Sierra Nevada mountain range forms the valley's border to the east. The region is dominated by agricultural uses and the topography is relatively flat with elevations rising gradually to the east, west, south, and north. The existing land use at the project site is primarily dry-farmed agriculture that has been intermittently irrigated. All of the parcels, except for one (APN 028-11-112), are currently owned by Westlands Water District.<sup>7</sup> For the past 10 years, the project site has been periodically in low-yield agricultural production (tilled, seeded, and harvested for winter wheat);

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<sup>7</sup> The Westlands Water District acquired these properties as part of the following settlements: (1) the September 3, 2002 settlement agreement reached among the United States, Westlands Water District, and others in the Summer Peck Ranch et al. v. Bureau of Reclamation et al. lawsuit; (2) the Britz settlement (a separate action executed on September 3, 2002); and (3) the 2002 settlement agreement reached in the Sagouspe et al. v. Westlands Water District et al. lawsuit.

occasionally irrigated (drip or sprinkler) and harvested for alfalfa seed or other crops; or disked twice a year and left fallow. The site is subject to high levels of selenium and a water table with drainage insufficient for most commercially irrigated crops. Furthermore, the project site (except APN 028-11-112) is part of Westlands Water District settlements that require a non-irrigation covenant upon transfer of ownership. For the portion of the project site that is cultivated without the benefit of irrigation, the productivity of these crops depends entirely on rainfall. When the unirrigated crops fail to mature to harvest, the land is grazed as rangeland grasses. There are no Williamson Act contracts binding any of the parcels.<sup>8</sup>

A small portion of the Project area is located on the Tranquillity Solar Project site and is currently developed with the Tranquillity Switching Station. Two existing PG&E overhead transmission lines are located on the north side of Dinuba Avenue, along the southern portion of the project site (see Figure 3). There are also existing PG&E utility lines at the site that would remain in place with an easement granted to PG&E for access.

The project site surrounds approximately 76 acres of federally owned land that are not proposed as part of the Project. This land will not be contained within the Project security fence and the existing legal access will be retained. It is anticipated that the existing use of this land for occasional dry farming followed by periods of fallow use would continue if the Project is approved. This land is not subject to a Williamson Act contract.

Roadways surrounding the solar facility comprise West Dinuba Avenue and SR 33 (West Derrick Avenue), both of which are paved, as well as South San Mateo Avenue and West South Avenue, which are dirt. These roads range between 15-feet and 50-feet wide and provide a buffer between the project site and the parcels to the north, west, south, and east.

Existing land uses surrounding the project site consist of agriculture, solar development, and two rural residences. Non-irrigated agricultural land surrounds the project site to the north, east, and west. These lands are owned mostly by Westlands Water District, which keeps them in various states of low-value agricultural production. The Tranquillity Solar Generating Facility and two rural residences border the project site to the south. The Adams East Solar Facility is located approximately 0.4 mile northwest of the project site.

## 9. Other Public Agencies Whose Approval is Required

The following discretionary approvals from other agencies may be required for the Project:

- **California Regional Water Quality Control Board:** coverage under the General Construction Permit for storm water discharges associated with construction activities;
- **Caltrans:** encroachment permit for project-related improvements in the SR 33 right-of-way, oversized/overweight permit and Traffic Control Plan for the transportation of substation transformers; and
- **California Public Utilities Commission:** certification of power sales contracts and authorization of PG&E's construction of transmission line and expansion of switching station.

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<sup>8</sup> The Williamson Act (also known as the California Land Conservation Act of 1965) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The contracted land is then restricted to agricultural and compatible uses through a rolling-term, 10 year contract between the private land owner and the local government.

## Environmental Factors Potentially Affected

This Project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Potentially Significant Unless Mitigation Incorporated” as indicated by the checklist on the following pages.

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Aesthetics                         | <input checked="" type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality                   |
| <input checked="" type="checkbox"/> Biological Resources               | <input checked="" type="checkbox"/> Cultural Resources                 | <input checked="" type="checkbox"/> Geology and Soils             |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions           | <input checked="" type="checkbox"/> Hazards and Hazardous Materials    | <input checked="" type="checkbox"/> Hydrology and Water Quality   |
| <input checked="" type="checkbox"/> Land Use and Planning              | <input type="checkbox"/> Mineral Resources                             | <input checked="" type="checkbox"/> Noise                         |
| <input type="checkbox"/> Population and Housing                        | <input type="checkbox"/> Public Services                               | <input type="checkbox"/> Recreation                               |
| <input checked="" type="checkbox"/> Transportation/Traffic             | <input type="checkbox"/> Tribal Cultural Resources                     | <input checked="" type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Mandatory Findings of Significance |  |   |

## Determination

Based on this initial evaluation:

- I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

County of Fresno  
Scarlet Solar Energy Project

- I find that although the proposed Project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

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Signature

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Date

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Printed Name

---

Title

# Environmental Checklist

## 1 Aesthetics

	Potentially Significant Impact	Potentially Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*a. Would the Project have a substantial adverse effect on a scenic vista?*

The County of Fresno General Plan Open Space and Conservation Element identifies scenic vistas in the county (County of Fresno 2000a). There are no designated scenic vistas in the viewshed of the project site. Therefore, no impact to a scenic vista would result from implementation of the Project.

**NO IMPACT**

*b. Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The Caltrans *Scenic Highway Mapping System* identifies one designated state scenic highway segment and three eligible state scenic highway segments in Fresno County (Caltrans 2018). These highway segments are between 20 and 50 miles from the project site. Therefore, the project site is not located in the viewshed of any of these highways.

Though not designated as a state scenic highway, I-5 is listed as a scenic roadway in the Fresno General Plan Open Space and Conservation Element (County of Fresno 2000a). The General Plan Environmental Impact Report designates I-5 as a scenic roadway due to the continuous unrestrictive views of adjacent coastal foothills that extend westward (County of Fresno 2000c: 4.16-1). The project site is located over 6 miles east of I-5 and would not obstruct views of the coastal foothills to

the west. For these reasons, there would be no impact from the Project on scenic resources viewed from a scenic highway.

**NO IMPACT**

- c. *Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?*

The visual character of the project site and surrounding area is generally open and rural in nature. The site is located in a region dominated by agricultural uses, interspersed with rural residences and solar development. The Project would involve the construction, operation, maintenance, and decommissioning of a 400 MW solar PV electricity generating facility, a 400 MW energy storage system, and associated infrastructure on a site that is primarily dry-farmed agriculture. While the Project would be visually compatible with the existing solar development in the Project area, it would alter the existing rural and agricultural character of the site as a result of converting agricultural land to a solar energy facility. This change to the project site's visual character is a potentially significant impact and will be analyzed further in an Environmental Impact Report (EIR) for the Project.

**POTENTIALLY SIGNIFICANT IMPACT**

- d. *Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The project site is located in a rural area in Fresno County where existing levels of light and glare are limited to security lighting at adjacent solar facilities, small exterior lights on adjacent residences, and minimal street lighting along SR 33. There are no existing sources of light or glare on the project site. Project operations would require minimal lighting for safety and security functions. Motion sensitive, directional security lights would be installed to provide adequate illumination around the substation areas, at each inverter cluster, at gates, and along perimeter fencing. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. All lighting also would conform to applicable Fresno County rules and regulations for outdoor lighting.

The solar PV module faces would be minimally reflective, dark in color, and highly absorptive of light. Therefore, it is not anticipated that they would result in substantial glare. However, light and glare produced at the project site could be potentially visible by motorists on the adjacent roadways, SR 33, and I-5. Additionally, light and glare produced by the proposed project would be visible to people in the residences located southeast of the intersection of Dinuba Avenue and west of Derrick Avenue. Although the Project is not expected to create a new source of substantial light or glare affecting day or nighttime views, this issue will be analyzed further in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

Improvements to PG&E electrical infrastructure would include expansion of the Tranquillity Switching Station and installation of approximately 1,900 feet of transmission line. These improvements are located within the project site which is not in the viewshed of a scenic vista or scenic highway. Similarly, they would have no impact on scenic vistas or scenic highways.

The Tranquillity Switching Station would be expanded north up to 190 feet, increasing the size of the switching station by up to 2 acres. The transmission line would include up to 1,900 feet of 230 kV conductor strung on up to 10 new or existing poles that would be up to 150 feet high (approximately 70 feet taller than existing poles). While these improvements would be visually compatible with the existing solar development in the area, potential changes to the visual character will be analyzed further in the EIR. In addition, for the same reasons as described above, the PG&E improvements are not expected to create a new source of substantial light or glare affecting day or night time views. However, this issue will be analyzed further in an EIR.

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## 2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

Would the Project:

- |  |   |   |   |   |
|--|---|---|---|---|
| a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?  | ■ | □ | □ | □ |
| b. Conflict with existing zoning for agricultural use or a Williamson Act contract?  | ■ | □ | □ | □ |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | □ | □ | □ | ■ |
| d. Result in the loss of forest land or conversion of forest land to non-forest use?   | □ | □ | □ | ■ |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?  | ■ | □ | □ | □ |

- a. *Would the Project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- e. *Would the Project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

The Farmland Mapping and Monitoring Program designates lands in the project site as either Farmland of Statewide Importance or Farmland of Local Importance (California Department of

Conservation 2014). The existing land use of the project site is primarily dry-farmed agriculture that has been intermittently irrigated. For the past 10 years, the project site has been irregularly in low-yield agricultural production (tilled, seeded, and harvested for winter wheat); occasionally irrigated (drip or sprinkler) and harvested for alfalfa seed or other crops; or disked twice a year and left fallow. Because of this situation, construction of the Project would convert Farmland to non-agricultural (solar) use. Impacts to Farmland from implementation of the Project would be potentially significant and will be evaluated in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- b. *Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The project site is not under Williamson Act contract and would not conflict with such a contract (Department of Conservation 2016). However, the entire project site is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) (Fresno County 2011). Solar energy facilities may be allowed in this zone by discretionary approval of an Unclassified Conditional Use Permit. Because the Project is located on land zoned for agricultural use, this issue will be analyzed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- c. *Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*
- d. *Would the Project result in the loss of forest land or conversion of forest land to non-forest use?*

The project site and immediate vicinity does not contain any land defined as forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, the Project would not conflict with existing zoning of forest land or result in the loss or conversion of forest land. No impact to forest land would occur as a result of the project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The portion of the project site on which the PG&E improvements would be made is designated as Farmland of Local Importance (California Department of Conservation 2014). Therefore, the PG&E improvements alone would have no impact on Farmland, as defined above. However, because the project site as a whole contains some Farmland of Statewide Importance, potential impacts on Farmland will be evaluated in an EIR.

The PG&E improvements are located within the project site which is not under Williamson Act contract and would not conflict with such a contract (Department of Conservation 2016). The project site is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size). The potential for the Project, including the PG&E improvements, to conflict with existing zoning for agricultural use will be evaluated in an EIR.

The PG&E improvements are located within the project site; therefore, for the same reasons discussed above, these improvements would have no impact on forest land or timberland.

### 3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

- a. *Would the Project conflict with or obstruct implementation of the applicable air quality plan?*
- b. *Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*
- c. *Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*
- d. *Would the Project expose sensitive receptors to substantial pollutant concentrations?*

The project site is located in the San Joaquin Valley Air Basin (Air Basin), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The Air Basin is in nonattainment for the federal and state standards for ozone and particulate matter (PM<sub>2.5</sub>) and state standards for PM<sub>10</sub>. The Air Basin is unclassified or classified as attainment for all other pollutant standards (California Air Resources Board 2017, SJVAPCD 2012). Implementation of the Project would generate both short-term construction-related emissions and long-term operational emissions with the potential to violate SJVAPCD standards or result in a cumulatively considerable increase in criteria pollutants. In addition, sensitive receptors (residences) adjacent to the project

site (southeast of the intersection of West Dinuba Avenue and South Derrick Avenue/SR 33) have the potential to be adversely affected by air pollutant emissions associated with Project construction. These air quality impacts would be potentially significant and will be assessed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

*e. Would the Project create objectionable odors affecting a substantial number of people?*

Substantial objectionable odors are normally associated with agriculture, wastewater treatment, industrial uses, or landfills. The Project involves the construction, operation and maintenance, and decommissioning of a solar energy facility and associated infrastructure that do not produce objectionable odors. No impact would occur from implementation of the Project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

Implementation of the PG&E improvements would generate short-term construction-related emissions with the potential to violate SJVAPCD standards, result in a cumulatively considerable increase in criteria pollutants, and adversely affect nearby sensitive receptors (residences). Emissions of air pollutants will be quantified and potential impacts on air quality will be assessed in an EIR. For the same reasons as described above, no impact related to objectionable odors would occur from implementation of the PG&E improvements.

## 4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

- a. *Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*
- b. *Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*
- d. *Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*
- e. *Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

The project site is located on undeveloped land and, although previously-disturbed, has the potential to support sensitive species and/or habitats. In addition, the project site is in the vicinity of the Pacific Flyway, a significant avian migration route. Construction, operation and maintenance, and decommissioning of the Project could adversely affect sensitive species and/or habitats, nesting and migratory birds, and conflict with local policies protecting biological resources. Impacts would be potentially significant and will be analyzed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- c. *Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The project site consists of agricultural land and is not traversed by any drainages or washes. The project site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, and other waters). Therefore, the Project would have no impact on federally protected wetlands.

#### **NO IMPACT**

- f. *Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The project site is not located in the boundaries of any adopted Habitat Conservation Plan or Natural Community Conservation Plan (California Department of Fish and Wildlife 2017, County of Fresno 2000a). Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan and no impact would occur.

#### **NO IMPACT**

### **PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements are located within the project site, which has the potential to support sensitive species and/or habitats. In addition, the project site is near the Pacific Flyway. Therefore, implementation of the PG&E improvements could adversely affect sensitive species and/or habitats, nesting and migratory birds, and conflict with local policies protecting biological resources; therefore potential impacts require further evaluation in an EIR.

As discussed above, the project site does not contain wetlands as defined by Section 404 of the Clean Water Act and is not located in the boundaries of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the Project, including PG&E improvements would have no impact on federally protected wetlands and would not conflict with provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

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## 5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a. *Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

According to a Cultural Resources Report by Rincon Consultants (2018), a historic well with associated water pump was identified on the project site. However, this resource was not found to be listed or eligible for listing on a register of historic resources. No other historic resources were identified on the project site. Therefore, potential impacts to a historical resource as defined in §15064.5 would be less than significant.

### LESS THAN SIGNIFICANT IMPACT

- b. *Would the Project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?*
- c. *Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*
- d. *Would the Project disturb any human remains, including those interred outside of formal cemeteries?*

The project site is currently in agricultural use with regular ground disturbing activities occurring during harvest and crop rotation. Formal assessment of paleontological and cultural resources, conducted by Rincon Consultants in 2018, did not reveal any listed or eligible archeological resources or paleontological resources on the project site. Therefore, the likelihood of encountering cultural or archeological resources, unique paleontological or geologic features, or human remains on the project site is minimal. However, grading and earth moving activities during proposed construction and decommissioning have the potential to disturb previously undiscovered cultural or

archaeological resources, unique paleontological or geologic features, and human remains. Impacts to such resources from implementation of the project would be potentially significant, and will be analyzed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements are located within the project site that does not contain historical resource as defined in §15064.5 or known archeological or paleontological resources. However, construction and decommissioning activities have the potential to disturb previously undiscovered archaeological resources, unique paleontological or geologic features, and human remains for the same reasons discussed above. Impacts from implementation of the PG&E improvements would be potentially significant with regard to criteria b–d and will be evaluated in an EIR. Impacts would be less than significant with regard to criteria a.

## 6 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a.1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

The project site is not located in an Earthquake Fault Rupture hazard zone as defined under the Alquist-Priolo Earthquake Fault Zoning Act, and no active or potentially active faults are mapped at the project site. The closest active faults to the project site are the Nunez Fault, located 25 miles south, and the Creeping Section of the San Andres Fault, located 35 miles southwest. There is no substantial evidence that an otherwise active fault capable of producing fault rupture underlies the project site (California Department of Conservation 2015). Therefore, the Project would not expose people or structures to potential substantial adverse effects from fault rupture and this impact would be less than significant.

**NO IMPACT**

- a.2. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

The project site is not located in an Alquist-Priolo Earthquake Fault Zone and no known faults cross the project site. Nonetheless, it is located in a seismically active region where several fault systems are considered to be active or potentially active. The closest active faults to the project site are the Nunez Fault, located 25 miles south, and the Creeping Section of the San Andres Fault, located 35 miles southwest (California Department of Conservation 2015). The project site may be subject to ground shaking in the event of an earthquake originating along one of the faults designated as active or potentially active in the project vicinity. Impacts related to seismic ground shaking would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- a.3. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*
- c. Would the Project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

Liquefaction is a process in which soil is temporarily transformed to fluid form during intense and prolonged ground shaking or because of a sudden shock or strain. Liquefaction occurs typically in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand. The project site is not located in a liquefaction hazard zone, but is located in an area of historic shallow groundwater that increases the potential for liquefaction hazard (California Department of Conservation 2010; Kleinfelder 2015). Impacts related to liquefaction would be potentially significant and thus warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- a.4. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

The project site is located on relatively flat terrain in the San Joaquin Valley. Hillside and other geographic features associated with landslide hazards are not present at the project site (California

Department of Conservation 2010). Therefore, the Project would not expose people or structures to risk of loss, injury, or death involving landslides. No impact would result.

**NO IMPACT**

*b. Would the Project result in substantial soil erosion or the loss of topsoil?*

Construction and decommissioning of the Project would involve grading of the project site. Grading results in soil disturbance, which increases the likelihood of erosion by breaking up large soil clods into smaller particles with a greater surface area that are more easily dislodged by raindrops, running water, or wind. Although the Project would not require the grading of any steep slopes or major earthworks, erosion could occur during construction or decommissioning. Impacts related to soil erosion would be potentially significant and will be addressed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

*d. Would the Project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

The project site is anticipated to be underlain by fine-grained clays and silts with some sands (Kleinfelder 2015). Soft clays and silts may be compressible and are anticipated to be moderately to highly expansive. Impacts related to expansive soils would be potentially significant and will be further evaluated in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

*e. Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The Project includes the construction of a septic tank and leach field near the corner of West Dinuba Avenue and SR 33, adjacent to the operation and maintenance building to support the restroom facilities. Shallow groundwater is present throughout the project site (Westwood Professional Services 2017). Due to the presence of shallow groundwater, impacts would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

## **PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements are located within the project site. For the same reasons discussed above, the potential for the PG&E improvements to result in impacts related to strong seismic ground shaking, seismic-related ground failure, soil erosion or the loss of topsoil, liquefaction, and expansive soils, will further be analyzed in an EIR. Also for the same reasons discussed above, the PG&E improvements would have no impact with respect to rupture of a known earthquake fault or landslides. The PG&E improvements do not include a septic tank or alternative wastewater disposal system and unlike the solar facility, would have no impact with regard to criteria e.

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# 7 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the Project:

- |   |   |   |   |   |
|---|---|---|---|---|
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?         | ■ | □ | □ | □ |
| b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases? | ■ | □ | □ | □ |

- a. *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*
- b. *Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Construction, operation and maintenance, and decommissioning of the Project would require equipment and vehicle use that would generate greenhouse gas (GHG) emissions. The Project consists of a renewable energy production facility (solar PV power generating facility) that would meet the requirements of California Renewable Portfolio Standard Program and the California Global Warming Solutions Act (AB 32 and SB 32) for the reduction of GHG emissions through production of renewable energy. In the long-term, the Project is expected to provide a net benefit with respect to the reduction of GHG emissions. The Project’s GHG emissions will be quantified and analyzed in detail in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The construction and operation of the PG&E improvements would result in similar but fewer GHG emissions than the solar facility. These improvements are part of the Project, which is a renewable energy production facility that would meet the requirements of California Renewable Portfolio Standard Program and the California Global Warming Solutions Act (AB 32 and SB 32). For the same reason discussed above, GHG emissions will be quantified and potential impacts will be analyzed in detail in an EIR.

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# 8 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the Project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a Project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a. *Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b. *Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

The Project would involve the transport, use, and disposal of hazardous materials and wastes during construction, operation, and decommissioning that could result in potential adverse health and environmental impacts if these materials were used, stored, or disposed of improperly, causing accidents and spills. Potential direct and indirect impacts of such releases could degrade soil and water quality or expose humans and the environment to the harmful effects of hazardous materials.

Excavation and grading activities associated with the Project construction and decommissioning could result in harmful exposures to subsurface materials, such as residual pesticides, Coccidioides (Valley Fever) fungus spores, or other unanticipated hazardous materials. Accidental releases of hazardous materials stored and used during Project construction, operation and maintenance, and decommissioning also could occur. Proper operation and management of on-site wastewater facilities, transformer duct banks, and stored oil would be required. There may also be plugged and abandoned oil exploration wells and/or former agricultural wells on the project site that if not properly identified and address could create a significant hazard to the public or the environment as a result of accidental release. Impacts would be potentially significant and will be analyzed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- c. *Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

The project site is not located within 0.25 mile of an existing or proposed school. No impact would occur as a result of the Project.

**NO IMPACT**

- d. *Would the Project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The Project would not be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public (U.S. Environmental Protection Agency 2018; Department of Toxic Substances Control 2018; State Water Resources Control Board 2018). No impact would occur as a result of the Project.

**NO IMPACT**

- e. *For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?*
- f. *For a Project near a private airstrip, would it result in a safety hazard for people residing or working in the Project area?*

The nearest airport to the project site is William Robert Johnston Municipal Airport, located approximately 9.5 miles north of the project site (Federal Aviation Administration 2018). The Project is not located in an airport land use plan and would not result in a safety hazard for people residing or working in the Project area. There would be no impact as a result of the Project.

**NO IMPACT**

- g. *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Neither Project construction nor operation and maintenance would involve the closure of roadways, interfere with identified evacuation routes, restrict access for emergency response vehicles, or restrict access to critical facilities such as hospitals or fire stations. The Project would not impair access to or operation of the Fresno County Emergency Operations Center because it is located approximately 35 miles away. The nearest hospitals to the project site are in Coalinga and Fresno, both approximately 30 miles away. Impacts of the Project on emergency response and evacuation plans would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- h. *Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The proposed Project is not located in a high or very high fire severity hazard zone (CAL FIRE 2007). Regardless, the Project includes fire prevention measures that would be implemented in order to minimize fire risk, which will be further discussed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

### **PG&E Tranquillity Switching Station Expansion and Transmission Line**

Implementation of the PG&E improvements would involve the transport, use, and disposal of a small amount of hazardous materials and wastes during construction and operation that could result in potential adverse health and environmental impacts if these materials are used, stored, or disposed of improperly, causing accidents and spills. Construction of the PG&E improvements would

also include ground-disturbing activities that could result in harmful exposures to subsurface materials, such as residual pesticides, *Coccidioides* (Valley Fever) fungus spores, or other unanticipated hazardous materials. For the same reasons discussed above, the PG&E improvements have the potential to create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials and will be further analyzed in an EIR. Fire prevention measures would also apply to these improvements and will be further analyzed in an EIR.

The PG&E improvements are located within the project site and therefore would not emit hazardous materials within 0.25 mile of a school, would not be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5, and would not create aviation hazards. Also for the same reasons discussed above, construction, operation, and decommissioning of the PG&E improvements would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

# 9 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Place structures in a 100-year flood hazard area that would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the Project violate any water quality standards or waste discharge requirements?*
- c. *Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?*
- d. *Would the Project substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*
- e. *Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
- f. *Would the Project otherwise substantially degrade water quality?*

Construction of the Project would involve ground disturbance and grading that could loosen existing surface soils and sediments, increasing the potential for erosion during storm events. Ground disturbance, grading, and the installation of impervious surfaces during construction could also alter the existing drainage and infiltration pattern of the site. Impervious and/or disturbed ground surfaces have the potential to increase the rate and volume of stormwater runoff, and thereby potentially increase possible on- or off-site flooding. Additionally, if dewatering is needed during construction due to shallow groundwater at the project site, dewatering activities would discharge directly to the land surface in the vicinity of the construction site and potentially result in soil erosion.

The use of construction equipment may involve the accidental release of fuel, oils, and other potentially hazardous substances at the site. Application of water for dust suppression or module washing could generate runoff that may transport pollutants (e.g., sediment, dissolved solids). These

pollutants could be delivered to surface water bodies during storm events, and/or be infiltrated into groundwater and the underlying aquifer, resulting in the degradation of water quality standards. Impacts would be potentially significant and require further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- b. *Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?*

The Project would require up to 360 acre-feet of water during construction and 20 acre-feet annually during operations. Project-related impacts on groundwater supplies would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- g. *Would the Project place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?*

Portions of the east side of the project site are designated a Federal Emergency Management Agency Flood Hazard Zone A (1% Annual Chance Flood Hazard) and the remainder of the site is designated Zone X (Area of Minimal Flood Hazard) (Westwood Professional Services 2017). However, there is no housing associated with this Project, nor is there any nearby housing downstream from the site. Therefore, the Project would have a less than significant impact regarding placing housing in a 100-year flood hazard area.

**LESS THAN SIGNIFICANT IMPACT**

- h. *Would the Project place structures in a 100-year flood hazard area that would impede or redirect flood flows?*

A portion of the project site falls in a 100-year flood hazard area, and there is potential for the Project to place structures in a 100-year flood hazard area and impede or redirect flood flows. Impacts would be potentially significant and require further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- i. *Would the Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam?*

The project site is not located in a designated dam inundation area for any major stream or region (County of Fresno 2009). Therefore, the Project would not expose people or structures to a significant risk involving flooding as a result of the failure of a levee or dam and no impact would result.

**NO IMPACT**

- j. *Would the Project result in inundation by seiche, tsunami, or mudflow?*

The project site is not located in an area subject to inundation by seiche, tsunami, or mudflow. No impact would occur as a result of the Project (County of Fresno 2009).

**NO IMPACT**

## **PG&E Tranquillity Switching Station Expansion and Transmission Line**

Similar to the solar facility, construction of the PG&E improvements would involve grading and ground disturbing activities, but the area would be much smaller. For the same reasons discussed above, the PG&E improvements have the potential to result in erosion, increase the rate or amount of surface runoff, provide additional sources of polluted runoff, and degrade water quality and these potential impacts require further analysis in an EIR.

The PG&E improvements would only require a small amount of water for dust suppression during construction and none during operations. However, potential impacts on groundwater supply will further be evaluated in an EIR.

The PG&E improvements are located within the project site. For the same reasons discussed above, the PG&E improvements would not be located in a designated dam inundation area, seiche, tsunami, or mudflow hazard zone, and consequently would not result in significant impacts with regard to these issues. Also, unlike the solar facility, the PG&E improvements would not be located in a 100-year flood hazard zone and would have no impact with regards to flood hazards.



# 10 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Conflict with an applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a. Would the Project physically divide an established community?*

The project site is located in a rural area in unincorporated Fresno County, approximately 3.5 miles southwest of the community of Tranquillity at the closest point. There are no other established communities in the area. Therefore, the Project would not physically divide an established community, and no impact would occur with respect to this issue.

**NO IMPACT**

*b. Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

The project site is designated as Agriculture in the Fresno County General Plan (2000a) and is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) (Fresno County 2011). Solar energy facilities are allowed in any zone district by discretionary approval of an Unclassified Conditional Use Permit. This issue will be analyzed in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

*c. Would the Project conflict with an applicable habitat conservation plan or natural community conservation plan?*

The Project would not be constructed in the boundaries of any adopted habitat conservation plan or natural community conservation plan. The closest habitat conservation plan is the Eastern Fresno

Habitat Plan that governs an area approximately 45 miles northeast of the project site. There are no adopted natural community conservation plans in Fresno County (California Department of Fish and Wildlife 2017; County of Fresno 2000a). No impact would occur as a result of the Project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements are located within the project site. For the same reasons discussed above, the PG&E improvements would not physically divide an established community or conflict with an applicable habitat conservation plan or natural community conservation plan.

The entire project site is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size). The potential for the Project, including the PG&E improvements, to conflict with existing zoning will be evaluated in an EIR.

# 11 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b. *Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The Project would not result in the loss of availability of known mineral resources or of a locally important mineral resource recovery site delineated in the Fresno County General Plan (2000b). The project site is not located in a mineral resource zone as defined by the California Department of Conservation California Geological Survey. In addition, the project site is not located on, adjacent to, or near mineral resources or recovery sites according to the Mineral Resources Data System, administered by the U.S. Geological Survey. The Project would not entail construction of structures or facilities for the purposes of extraction or exploration of mineral resources and the Project would not result in the loss of availability of a mineral resource of local, regional, or statewide importance. No impact would occur with respect to mineral resources.

**NO IMPACT**

## PG&E Tranquillity Switching Station Expansion and Transmission Line

The PG&E improvements are located within the project site. For the same reason as discussed above, these improvements would have no impact to mineral resources.

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# 12 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	■	□	□	□
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	■	□	□	□
c. A substantial permanent increase in ambient noise levels above those existing prior to implementation of the project?	■	□	□	□
d. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the project?	■	□	□	□
e. For a Project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	□	□	□	■
f. For a Project near a private airstrip, would it expose people residing or working in the Project area to excessive noise?	□	□	□	■

- 
- a. *Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
  - c. *Would the Project result in a substantial permanent increase in ambient noise levels above levels existing without the project?*
  - d. *Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the project?*

The County of Fresno General Plan Health and Safety Element and Noise Ordinance (Chapter 8.40 of the Fresno County Development Code) establish standards for acceptable noise levels. Construction and decommissioning of the Project would result in a short-term increase in noise levels from the use of construction equipment and construction traffic. However, the Noise Ordinance exempts noise from construction activities from the standards provided if they take place after 6:00 a.m. and before 9:00 p.m. Monday through Friday, or after 7:00 a.m. and before 5:00 p.m. on weekends. As stated in Section 7, Description of Project, construction equipment would operate between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday. Weekend work, although unlikely, could occur and would similarly adhere to the time limits in the Noise Ordinance (i.e., weekend work would take place after 7:00 a.m. and before 5:00 p.m.). Decommissioning activities would also follow this work schedule. Therefore, short-term construction and decommissioning activities associated with the Project would be exempt from the County's noise policies and standards and there would be no conflict relative to Fresno County noise policies or standards. Nevertheless construction-related noise will be evaluated further in an EIR.

Operation and maintenance of the Project would generate long-term operational noise from stationary equipment, such as transformers and inverters, generation-tie lines, and maintenance vehicle travel that could result in exposure of nearby residences to noise levels in excess of standards and limits established by Fresno County. Noise-related impacts would be potentially significant and will be analyzed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- b. Would the Project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*

Grading and other ground-disturbing activities would generate new short-term ground borne vibration and ground borne noise during the Project's construction and decommissioning phases that could affect nearby residents. This impact would be potentially significant and will be analyzed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- e. For a Project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?*
- f. For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the project area to excessive noise?*

The nearest airport to the project site is William Robert Johnston Municipal Airport, located approximately 9.5 miles north of the project site (Federal Aviation Administration 2018). The Project is not located in an airport land use plan; therefore, it would not expose people residing or working in the Project area to excessive noise levels. No impact would result from implementation of the Project.

#### **NO IMPACT**

### **PG&E Tranquillity Switching Station Expansion and Transmission Line**

Implementation of the PG&E improvements would result in a short-term increase in noise levels and ground borne vibration from the use of construction equipment and construction traffic, as well as a

long-term increase in operational noise from the switching station and transmission line. For the same reasons described above, impacts related to noise and vibration will be further analyzed in an EIR.

The PG&E improvements are located within the project site, which as described above is not located in an airport land use plan or within the vicinity of a private airstrip; therefore, the PG&E improvements would not expose people residing or working in the Project area to excessive noise levels.

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# 13 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The Project would not include any new homes or businesses and would not directly induce substantial population growth. The Project would directly generate short-term employment during construction and decommissioning, and up to eight full-time jobs during Project operation. The total number of construction workers at any given time would range between 132 and 678. However, these jobs are not expected to induce substantial population growth because Project needs can be met by the existing available Fresno County construction labor pool. The California Employment Development Department reported that the unemployment rate in the Fresno County was 8.7 percent in March 2018 (as compared to the statewide unemployment rate of 4.2 percent) (California Employment Development Department 2018). Based on this data, the number of new jobs that would be created by the Project could be served by the existing available Fresno County labor pool.

The Project would include a perimeter road, access roads, and internal roads; however, these roads would be solely for the purpose of access to the project site during construction and operation and would not increase access to urban areas that would remove obstacles to growth or indirectly increase population growth.

While the Project would contribute to energy supply, which can indirectly support population growth, development of the Project is a response to the state's need for renewable energy to meet its Renewable Portfolio Standard and would interconnect with the state's infrastructure. The power generated would be added to the state's electricity grid, with the intent that it would displace fossil-fueled power plants and their associated GHG emissions. The Project is not proposed for development as a source of base-load power in response to growth in demand for electricity.

Therefore, the Project would not indirectly induce substantial population growth. Impacts of the Project on population growth would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- b. Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- c. Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The project site is currently agricultural land and no housing or other occupied structures are present. Therefore, the Project would not displace any housing or people. No impact would occur from implementation of the Project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

For the same reasons discussed above, the PG&E improvements would not directly or indirectly induce substantial population growth. Furthermore, the PG&E improvements would be located on the project site, which does not contain housing or other occupied structures. Therefore implementation of the PG&E improvements would not displace any housing or people.

# 14 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1 Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a.1-5. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, other public facilities?*

The Project is a solar energy facility that would neither involve the construction of new or physically altered governmental facilities nor result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. Increases in demand for public services requiring new or physically altered governmental facilities typically are associated with substantial increases in population. The Project would not include new residences or development on a scale so large that it could not be provided with services through existing facilities. Therefore, impacts to public services would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

For the same reasons as discussed above, impacts to public services as a result of the Project, including the PG&E improvements, would be less than significant.

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# 15 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b. *Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The Project involves the construction, operation and maintenance, and decommissioning of a solar facility and energy storage system. As discussed in Section 13, Population and Housing, and Section 14, Public Services, the Project does not include new residences and would not increase the population. Therefore, the Project would not result in substantial new population growth that would result in physical deterioration of existing recreational facilities or require the construction of new or expanded recreational facilities. No impact to recreational facilities would result from implementation of the Project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements do not include new residences and would not increase the population. For the same reason as discussed above, the PG&E improvements would have no impact on recreational facilities.

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# 16 Transportation/Traffic

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	■	□	□	□
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	■	□	□	□
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	□	□	□	■
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	■	□	□	□
e. Result in inadequate emergency access?	■	□	□	□
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	□	□	□	■

- a. *Would the Project conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?*
- b. *Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*
- d. *Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*
- e. *Would the Project result in inadequate emergency access?*

The Project would increase traffic compared to existing conditions, primarily during construction. Trips generated as a result of the Project have the potential to impact area intersections and roadway segments and contribute to cumulative traffic increases. The Project may increase hazards, result in inadequate emergency access, or conflict with applicable plans and policies. Traffic impacts would be potentially significant and will be analyzed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- c. *Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The nearest public airport to the project site is the William Robert Johnson Municipal Airport, located approximately 9.5 miles to the north of the project site (Federal Aviation Administration 2018). The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. No impact would result from implementation of the Project.

#### **NO IMPACT**

- f. *Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?*

There are no existing or planned pedestrian, bicycle, or transit facilities in the Project area with which the Project could interfere (County of Fresno 2010a, 2013; Fresno Council of Governments 2018). The Project would not introduce a barrier to non-motorized travel. Therefore, it would not conflict with adopted policies, plans, or programs supporting public transit, bicycle, or pedestrian modes of transportation. The Project also would not decrease the performance or safety of public transit, bicycle, or pedestrian facilities because there are no such facilities in the affected area. Therefore, no impact would result from implementation of the Project.

#### **NO IMPACT**

### **PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements would generate a small number of vehicle trips primarily during construction. While the number of trips would be less than those generated by the solar facility, the potential to impact area intersections and roadway segments and contribute to cumulative traffic



increases will be evaluated in an EIR. Implementation of the PG&E improvements may also increase hazards, result in inadequate emergency access, or conflict with applicable plans and policies. Traffic impacts from the PG&E improvements would be potentially significant and will be analyzed in an EIR.

The PG&E improvements are located within the project site, which as described above, is not located in the vicinity of an airport or of existing or planned pedestrian, bicycle, or transit facilities. Therefore, the PG&E improvements would have no impact on air traffic patterns or the performance or safety of public transit, bicycle, or pedestrian facilities.

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# 17 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

California Assembly Bill 52 of 2014 (AB 52) was enacted July 1, 2015, and expands CEQA by defining a new resource category, “tribal cultural resources.” AB 52 establishes that “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It states further that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, and in applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe

AB 52 also establishes a formal consultation process for California Native American tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

*a. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)*

*b. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1?*

The Project is located in the immediate area of interest for the Table Mountain Rancheria. A search of the Native American Heritage Commission Sacred Lands Inventory identified no known Native American traditional sites/places on the project site (Rincon Consultants 2016). The County conducted consultation under AB 52, providing notification to the Table Mountain Rancheria, Dumna Wo Wah, Santa Rosa Rancheria, and the Picayune Rancheria of the Chukchansi Indians on May 4, 2018. Table Mountain Rancheria declined participation in a letter dated May 17, 2018, and no other responses were received within 30 days. No impact to tribal cultural resources would occur as a result of the Project.

**NO IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

The PG&E improvements are located within the project site. For the same reasons described above impacts to tribal cultural resources (criteria a and b) will be discussed in an EIR.

# 18 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a. *Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

During construction, restroom facilities would be provided in the form of portable units to be serviced by licensed providers. During operation of the Project, a septic system and leach field would be installed adjacent to the O&M building to support the restroom facilities and sewage

needs of eight permanent staff (eight hours per day). Anticipated peak flow is 600 gallons into the leach field per day during Project operation (or 0.67 acre-feet per year) (Recurrent Energy 2018). No surface discharges are proposed beyond natural stormwater runoff. A Waste Discharge Permit would not be required from the Regional Water Quality Control Board because the Project would not exceed 2,500 gallons of sewage per day. Personnel on-site to perform module washing (up to four times per year) would be provided with portable restrooms serviced by a licensed provider. No wastewater would be generated during panel washing, as water would be absorbed into the surrounding soil or would evaporate. Therefore, the Project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board and no impact would result.

**NO IMPACT**

- b. *Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The Project includes installation of a septic tank and leach field and would not result in the expansion of existing water facilities or in the construction of new water facilities. Water for the Project would be brought in by truck. The septic system would be required to be permitted by the Fresno County Department of Public Works and Planning. The septic system and leach field testing procedures and design would meet all applicable specifications and regulations. However, this will be discussed in further detail in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- c. *Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The Project involves the construction, operation and maintenance, and decommissioning of a solar facility and energy storage system and associated infrastructure. The Project would increase impervious surfaces and require the construction of stormwater drainage facilities. Therefore, impacts would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- d. *Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?*

Water would be required for the construction, operation and maintenance, and decommissioning phases of the Project. A water supply assessment will be prepared for the Project to evaluate potential impacts, which will be discussed further in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- e. *Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

The project site is located in rural unincorporated Fresno County and would not be served by a municipal wastewater treatment provider. No impact would occur as a result of the Project.

**NO IMPACT**

- f. *Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
- g. *Would the Project comply with federal, state, and local statutes and regulations related to solid waste?*

The project site is serviced by the American Avenue Landfill, which has a remaining capacity of 29,385,535 cubic yards (CalRecycle 2018). Operation and maintenance activities associated with the Project are not anticipated to produce a substantial amount of solid waste. However, large amounts of solid waste are anticipated during the construction and decommissioning phases of the Project. Decommissioning would occur after the American Avenue landfill reaches its permitted capacity; therefore, decommissioning waste would be hauled to the nearest active landfill. Currently, the nearest landfills after American Avenue are the City of Clovis landfill, located in Clovis in Fresno County, and the Billy Wright Disposal Site, located in Los Banos in Merced County. Impacts would be potentially significant and will require further analysis in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

##### **PG&E Tranquillity Switching Station Expansion and Transmission Line**

Unlike the solar facility, the PG&E improvements would not generate wastewater or require new water or wastewater treatment facilities or expansion of existing facilities. Therefore, no impact would result with respect to these issues.

Expansion of the Tranquillity Switching Station would increase impervious surfaces, and therefore could require the construction of stormwater drainage facilities. For the same reasons described above, potential impacts related to storm water drainage facilities will require further analysis in an EIR.

Construction of the PG&E improvements would require a small amount of water for dust suppression during, which will further be discussed in an EIR. Construction and decommissioning of the PG&E improvements would generate a small amount of solid waste. For the reasons described above, potential impacts require further analysis in an EIR.

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# 19 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Does the project:

- |   |   |   |   |   |
|---|---|---|---|---|
| a. Have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ■ | □ | □ | □ |
| b. Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | ■ | □ | □ | □ |
| c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | ■ | □ | □ | □ |

- a. *Does the Project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As noted under Section 4, *Biological Resources*, and Section 5, *Cultural Resources*, implementation of the proposed Project would have potentially significant impacts on special status species and cultural and paleontological resources such that further analysis in an EIR is warranted.

**POTENTIALLY SIGNIFICANT IMPACT**

- b. *Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Impacts of the Project in conjunction with other projects in the surrounding area may be cumulatively considerable relative to aesthetics, air quality, cultural resources, GHG emissions, hydrology and water quality, noise, traffic and circulation, and /or utilities and service systems. Cumulative impacts of the Project would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

- c. *Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, geology and soils, noise, and traffic safety. As detailed in the preceding responses, the Project would potentially have environmental effects that cause substantial adverse effects in the issue areas of air quality, geology and soils, hazards and hazardous materials, noise, and traffic. Impacts to human beings would be potentially significant and warrant further analysis in an EIR.

**POTENTIALLY SIGNIFICANT IMPACT**

**PG&E Tranquillity Switching Station Expansion and Transmission Line**

For the same reasons as discussed above, the PG&E improvements have the potential to result in significant impacts on special status species and cultural and paleontological resources. Similarly, in conjunction with other projects, the PG&E improvements, may result in cumulative impacts relative to aesthetics, air quality, cultural resources, GHG emissions, hydrology and water quality, noise, traffic and circulation, and /or utilities and service systems. The PG&E improvements would potentially have environmental effects that cause substantial adverse effects in the issue areas of air quality, geology and soils, hazards and hazardous materials, noise, and traffic safety and could cause substantial adverse effects on human beings. Potential impacts require further analysis in an EIR.

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